DOCUMENT RESUME

ED 119 602 HE 007 614

AUTHOR Hamilton, I. Bruce
TITLE Some Issues and Examples of Alternate Modes of Graduate Education: A Discussion Paper.
INSTITUTION Educational Testing Service, Washington, D.C.
PUB DATE Feb 72
NOTE 53p.; Paper prepared for the panel on Alternative Approaches to Graduate Educaton

EDRS PRICE MF-$0.83 HC-$3.50 Plus Postage
DESCRIPTORS *Educational Alternatives; Educational Finance; *Educational Innovation; Educational Objectives; Extension Education; External Degree Programs; Faculty; *Graduate Study; *Higher Education; Instructional Materials; *Models; Part Time Students; Program Development; Research; State Programs; Students

ABSTRACT

This overview presents some of the issues that face those concerned with post baccalaureate education, particularly these issues that emerge from new activities and proposals before the graduate community currently. Three sections and an appendix are presented. Covered are: (1) definitions and distinctions; (2) issue-clusters in the areas of the components of graduate education, the processes, and the concepts; (3) recent examples of new programs that might serve as models. Also included is an inventory and compendia of examples of nontraditional study prepared for the Commission on Non-Traditional Study. (Author/KE)

****
* Documents acquired by ERIC include many informal unpublished *
* materials not available from other sources. ERIC makes every effort *
* to obtain the best copy available. Nevertheless, items of marginal *
* reproducibility are often encountered and this affects the quality *
* of the microfiche and hardcopy reproductions ERIC makes available *
* via the ERIC Document Reproduction Service (EDRS). EDRS is not *
* responsible for the quality of the original document. Reproductions *
* supplied by EDRS are the best that can be made from the original. *
****

ED119602

PF

SOME ISSUES AND EXAMPLES OF ALTERNATE MODES OF GRADUATE EDUCATION:

A Discussion Paper

Prepared for the

Panel on Alternate Approaches to Graduate Education

PERMISSION TO REPRODUCE THIS COPYRIGHTED MATERIAL HAS BEEN GRANTED BY
ETS
TO ERIC AND ORGANIZATIONS OPERATING UNDER AGREEMENTS WITH THE NATIONAL INSTITUTE OF EDUCATION. FURTHER REPRODUCTION OUTSIDE THE ERIC SYSTEM REQUIRES PERMISSION OF THE COPYRIGHT OWNER.

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

HE 007614

I. Bruce Hamilton
February 1972

(Not for reproduction or distribution without permission)

CONTENTS

I. Definitions and Distinctions.....Page 2

II. Issues in Non-Traditional Graduate Education.....Page 4

A. Components.....Page 5

1. Students
2. Faculty
3. Learning Materials
4. Finance
5. Institutions

B. Processes.....Page 15

1. Program Availability and Selection
2. Entry Processes
3. Program Design Characteristics and Requirements

a) Part-Time
b) Extended University
c) External Degree
d) Single Purpose/Unique Programs

4. Modes of Study
5. Evaluation of Performance and Recognition of Learning
6. Certification and Credentialing
7. Post-Program Performance
8. Reprocessing
9. Convergent Issues

a) Accreditation
b) Financial Aid
c) Testing
d) University Extension Programs
e) Degrees

C. Concepts.....Page 33

III. Examples of Non-Traditional Graduate Education.....Page 36

1. State Systems
2. Advanced Technology
3. Research Companies
4. Single Purpose
5. Unique

IV. Appendix.....Page 49

This paper is an overview of some of the issues which face those concerned with post-baccalaureate education, particularly those issues which emerge from new activities and proposals before the graduate community currently. It does not purport to be a scholarly or definitive treatment; the intention is only to pull together in an organized fashion issues and examples which have been discussed by recent observers of the non-traditional study movement. Others will be able to add issues and examples not included here, and are indeed invited to do so. As a discussion paper, it is expected to act only as a point of departure for a more thorough investigation. A number of persons' ideas and arguments are listed here without citation. The nature of this overview precludes full and proper credit for helpful contributions which may be recognizable in the paper by their true authors.

There are three sections and an appendix presented. The first deals with definitions and distinctions which govern the later treatment. Discussion of differences of opinion concerning these definitions will be helpful in clarifying the domain of non-traditional graduate learning. The second section raises issue-clusters in three separate areas: the components of graduate education, the processes, and the concepts. The third outlines several recent examples of new programs which might serve as models of one or another of the differing processes or concepts raised in the second section. There are few existing models from which to choose examples, of course, but as the decade progresses there will surely be others. It is therefore vital that a careful discussion of the problems and prospects inherent in these examples be delineated at the beginning of the decade so as to serve as a map to guide others across a largely unknown terrain.

An inventory and compendia of examples of non-traditional study prepared for the Commission on Non-Traditional Study is enclosed. These act as part

of an appendix to this paper and provide a resource against which the issues raised here may be illustrated.

I

What is non-traditional graduate or post-baccalaureate education? For the purposes of this paper, non-traditional graduate education is everything which is not traditional. That established system of graduate study and instruction described in some detail by Berelson, for example, in Graduate Education in the United States is here conceived of as traditional: the established degrees; the usual modes of learning including face-to-face classroom lecture, seminar, thesis writing, faculty advising, research, and the like; the traditional (post-World War II) student; the traditional, credentialed faculty; the traditional setting, and so forth. What departs from this pattern can be considered fair subject for discussion as potential examples of non-traditional graduate education. Distinction between what is the traditional model and what is not are, of course, open to vigorous debate.

Related to the concept of non-traditional graduate study is the definition of what "graduate" means in this context. "Graduate" may mean post-baccalaureate work in an institution of higher learning, or it may be conceived of as advanced study whether or not the "student" has a baccalaureate degree; it may mean degree-related study, or continuing education not designed to credential or certify the student. It may also be non-institutionalized advanced learning. This paper defines "graduate" in terms of advanced subject matter primarily, and intent of the program secondarily. The age, credentials, and specific preparation of the student for advanced study are not conceived here as the critical criteria in defining graduate.

This definition tends to beg the question, but with good cause. Other definitions would limit the possibilities open for discussion of non-traditional study.

What is meant by advanced subject matter must be individually defined field by field, intellectual discipline by discipline, and in some cases institution by institution. The complex system of advanced study in the United States defies the accurate use of any single definition that attempts to broadly encompass a whole layer of educational structure. So, too, must the programs at different places offering different areas of learning be self-defined in their intent. For example, many universities in other countries offer the professional study of law to post-secondary school students. There may be very good reasons for doing so, but the concept of study for the legal profession is generally regarded as a post-baccalaureate activity in the United States. A similar case may be advanced for other professional programs. We, however, define most of our developed professions as suitable for "graduate" status, and in those terms set admission standards appropriately. Thus these two concepts, advanced knowledge and program intent, tend to govern the domain of graduate study encompassed in the present discussion. Nothing is said in this definition of degree as opposed to non-degree programs, or of institutionalized as opposed to non-institutional study.

A further distinction which may be an aid in a discussion of this kind is among the concepts of learning, schooling, and education. Learning is what goes on in an individual that may be demonstrable in behavior change if our instruments of assessment were accurate and delicate enough. Schooling, on the other hand, is what goes on in programs, institutions, and the organized efforts of individuals whose intentions are to bring about certain kinds of

behavior changes in individuals. Education, therefore, is the result when learning and schooling by design take place together. Education, while undefined in itself, is measured by credentials, certificates, and degrees - awarded by the school or other agency for certain learning which has gone on. Thus using this definition, getting an education means approximately the same thing as earning a degree, whereas learning may or may not be related to a degree program or a school. The distinction is relevant to a discussion of non-traditional study as shall be clear in Section II.

The expressed focus of most proposals which have been submitted to the educational community by proponents of non-traditional study have been the needs of students unmet by our traditional system. It is the thesis of most new programs that they are in response to unmet demands felt by individuals and groups. The propriety of focus on the student in such programs is accepted as a given in the present discussion. However, it is an open question whether many institutions are not adapting or adaptable to present and emerging needs of students, or that some non-traditional programs have the interests of students paramount. Thus both issues and examples expressed here are not evaluated beyond the fact of their inclusion on the grounds of their apparent relevance to a discussion of non-traditional graduate education.

II

There are doubtless several ways to conceptualize the domain of non-traditional graduate learning in the broad senses defined earlier. This paper utilizes a catch-all conception rather than a unified construction which might be more elegant. Three broad elements are involved: the components of graduate learning and schooling; the processes including entry, programmatic designs, validation measures, certification and credentialing,

and the like; and a rather vague element labeled, for convenience, concepts. When non-traditional changes are introduced into these elements, clusters of issues surface which are of greater or lesser concern to this Panel. The purpose here is merely to mention several of the predominant issues in each cluster.

COMPONENTS

What are the components of graduate education? If one conceives of the whole as an input-process-output model, the components are analogous to the input elements: students, faculty, learning materials, facilities, financial support, and so forth. In the context of non-traditional study, what then are the issues?

Students

A series of issues surround students in relation to non-traditional education. On the one hand many observers in recent years speak of the unmet educational needs of non-traditional students. These students are commonly described as (1) older than traditional graduate students (2) women who have stopped out of the educational process to raise families but who now want advanced work (3) confined persons, those in remote areas, or those who because of life circumstances (such as the military) must relocate frequently (4) foreign scholars (5) handicapped persons and (6) educationally disadvantaged persons. On the other hand, one could also add that it is conceivable to include the special requirements of traditional students who have a personal need for non-traditional modes of learning but who do not now have the chance to experience these kinds of activities.

The issues surrounding students are many and complex. Qualification for entry is not among the least of these. Non-traditional students are likely not to have recent collegiate academic work, perhaps little or no standard grading of what work is recorded (non-traditional undergraduate programs will surely produce some students who prefer non-traditional graduate work), perhaps no recent or relevant test score, and little recent contact with faculty in the academic world who might recommend them. Many students may point to experience and on-the-job performance in place of traditional measures of qualification, and others may be unqualified in the traditional sense (no baccalaureate degree, poor academic record or degree from an unaccredited institution) but who demand entry to a non-traditional program which may be claimed more agreeable to their learning style.

Traditional academic programs are already trying to cope with entry problems posed by non-traditional students. The consensus is that many more of these students in the near future will seek entry into both traditional and non-traditional programs, and that other ways of assessing readiness for advanced study may have to be devised.

Another issue with regard to student entry into graduate programs is entry to what. It is apparent that most traditional students seek degrees that recognize the learning that has gone on in the program. Large numbers of older students and women currently accommodated in extension programs and evening colleges, however, may be concerned with opportunities for learning primarily, and recognition secondarily. The issues of appropriate degree program, non-degree program, or other program goals for non-traditional students is one which may be debated for some time to come.

Requirements of flexible attendance, frequent relocation, credit transference, part-time attendance, and off-campus instruction are particularly

difficult issues generated by the non-traditional student. Programs quite literally may have to be restructured to accommodate persons with special circumstances. On many campuses, special programs for minorities who may be educationally disadvantaged have been initiated to ease entry and increase the chances for success of these students. Similar measures may have to be taken with regard to other types of non-traditional students. Self-paced, part-time graduate study by larger numbers of students is likely also to draw time and resources away from the established degree programs, and both faculty and institutions will doubtless have a difficult period of readjustment to these new demands.

It would seem clear that each institution will have to define for itself the kinds of non-traditional students it wishes to serve, and the mode of schooling offered in its programs. Adjustments of this kind are occurring continually in small ways, but the trend toward a much more flexible system based upon the models of the undergraduate external degree and flexible schooling programs may force a major upheaval in the graduate schools when coupled with similar shifts in funding patterns and goals. The large existing investment in doctoral programs may have to undergo major reallocation to masters' and professional or applied programs. The question is can the established multi-purpose institutions adjust rapidly enough to preclude the establishment of a host of low-quality, single-purpose programs designed to meet a specific and perhaps profitable demand by a specific public?

Faculty

Faculty members, it has been said, are the most traditional components of education, and the last to accept innovations which appear outside the traditional framework within which they received their training. This is

particularly true of the Ph.D. programs which are the central pattern of graduate education in many larger, multi-purpose institutions. The historical record does not always confirm this statement, but it is clear that some faculty are reactionary, as are some voters; others are not, and like the analogy of the electorate, many of the younger faculty tend to be more open to innovation, particularly if their professional advancement is not threatened by a liberal stance.

The issues with regard to traditional faculties seem to involve adaptability to new forms and modes of instruction, the acceptance of new program goals, and the existence of new kinds of students under their supervision. To a faculty person supported by a generous training grant during his doctoral studies, who comes to professional maturity in an expanding system characterized by full support for both students and basic research, and the lionization of the doctoral degree, a loose system of degree and non-degree programs designed to meet social and intellectual demands quite different from his personal experiences probably comes as a disquieting problem if not a direct threat. One suspects that non-traditional programs will have a hard go of it in institutions generally regarded as prestigious ones where the above professor holds predominant influence. Yet the same cannot be said of all faculty and all institutions, particularly those in which large-scale non-traditional undergraduate programs have been successful. During a period of scarce resources, the existence of a number of successful experimental undergraduate programs, the continued discussion of non-traditional modes of study and instruction at professional meetings, in the literature, and on the campus, suggest that there are grounds for expecting a readiness for change unprecedented in the recent past among traditional faculties concerned with graduate instruction in our schools.

Some kinds of non-traditional programs, however, will require the educational services of what are often called adjunct faculty, or para-professionals, or "community resources." The issues here are to what extent these persons are included as part of the educational program, and what demonstrated tests of professional competence are required of them. Certain graduate programs in some fields may find non-campus "faculty" an easy and natural extension of their total faculty resources available for advising and instruction in non-traditional, or even traditional programs. One can think of some technical and professional fields where high competence is not confined to or even primarily found on campuses. Other fields may find the concept unworkable. The issue here, one supposes, is what fields can reasonably accommodate off-campus adjunct faculty, what qualifications these persons must have to be regarded as equal partners with on-campus faculties, and who decides these matters.

A concept which is gaining momentum in undergraduate experimental programs but which may have a more reasonable and practical home in graduate study is that of the academic "mentor." A mentor as generally defined (see Section III, p. 37) is a professional scholar whose competence ranges across several areas, and whose orientation is toward the practical rather than strictly theoretical domain. The conceptual goal is for the mentor and his charge, on a one-to-one basis, to determine the academic needs of the student in reaching a particular academic goal, and to map out a way of achieving that goal. The mentor then supervises progress, giving some instruction and a good deal of guidance, and with the student decides when that goal has been achieved. If a degree is in question, the mentor sponsors the student to a degree committee which may require certain evidence of competence. Both Empire State College

in New York and a proposal before the legislature in Massachusetts for an Open University there call for a mentor at least through the master's level. Presumably the academic and dissertation advisers, as now conceived on many campuses in doctoral programs, partake of certain aspects of the mentor's role. However, the full mentor concept is a larger and broader one than is generally current in graduate schools, and may require a very different kind of scholar to successfully carry out the concept. Several important issues follow from this discussion, including what the appropriate training and selection procedures are for mentors, their role vis-a-vis traditional faculty, and how one evaluates performance in this activity.

Learning Materials

Traditional learning materials include books and articles, laboratory and experimental equipment, certain research tools including calculators, computers, scientific and technical devices of one sort or another, and learning resource materials and experiences. Under the latter category fall widely varying experiences such as the use of cadavers for medical students and extensive exposure to foreign cultures for budding anthropologists. Some of these learning materials were non-traditional innovations just a few years ago, and it is likely that others will become accepted as time passes. It does not appear that resistance to innovation is as great in this area as in others, and change may therefore take place quite rapidly. Once again, however, what non-traditional learning materials become salient issues in one field may be unimportant in another, and the resolution in one field may have no general applicability.

Curiously, the demands for inclusion of groups of non-traditional students and new program designs may be seriously hampered because it may be

impossible or difficult for traditional learning materials to be used appropriately. How can the part-time, self-paced, or geographically remote students have access to some of the important traditional materials or experiences of learning? The problems, and to some, clear cases of compromise in program quality suggested by these issues are difficult to grapple with by any faculty. A redefinition of the goals of learning and schooling may in many cases be the only way to approach the issue.

Several non-traditional learning materials are now available. Technological devices such as video and audio-cassettes, closed circuit (or public) television systems, programmed learning materials, computer assisted instruction and the like are among the most common. More difficult to assess are learning experiences that may take place off campus in an uncontrolled or unsupervised setting. While the cross-cultural experience of the anthropologist is an accepted pattern in that field, a similar experience for the sociologist, psychologist, or other social science field is generally not. Work-study experiences are common in some areas, not in others. It would seem that there are a good number of opportunities for cross-fertilization of learning ideas from one field to another at this time, particularly with the inclusion of new kinds of students and more open faculty in graduate programs.

The existence of rich educational resources within a metropolitan region may have as much an impact upon graduate programs as is said to be the case with undergraduates. Inward-looking graduate curricula have generally left unexploited the potentially useful resources, both human and material, within an easily accessible region. The five-county area around Syracuse, New York, for example, is currently being carefully surveyed for this purpose. Both faculty and students can, one feels, benefit

from increased exposure to competent persons dealing with similar issues and problems in the community.

Finally, the issue of the educational value of the peer group as a learning resource is a particularly important one with regard to non-traditional study. For years it has been said that one component of graduate education is the "mix" and "critical mass" of students needed to make a program operate successfully. The equal value of individual learning as opposed to schooling hinges upon the assumption that learning is the only object of education, rather than the alternate assumption that inclusion of socialization experiences is an indispensable component. There appears to be merit in the argument that learning takes place more easily when the learner has free access to others with whom to discuss issues and problems. The peer group has traditionally been the means of providing this contact. Beyond this opportunity, however, is a "group" necessary for advanced learning to take place? Programs, it seems, could be designed to allow for ample contact without the need for extensive on-campus residence requirements to bring a peer group together for the presumed benefits that derive therefrom. The Goddard and Union Graduate School experiments both call for a four to six week seminar as an important component of their external degree programs. Research on this issue would seem to be an essential activity for the near future if external degree programs are to be widely accepted at the graduate level.

Finance

Currently the most critical aspect of traditional doctoral degree programs is the lack of adequate financial support to continue present levels

of activity in this area. Finance, therefore, becomes a key issue with regard to non-traditional programs because (1) new kinds of students may be served thus providing a basis for increased support for graduate instruction (2) new kinds of programs, more directly relevant to public problems and issues, may be eminently salable in place of the traditional degree programs (3) new modes of study may allow larger numbers of students to enroll in traditional degree programs without altering substantially the basic financial expenses of running the programs and (4) new methods of supporting graduate study may expedite the search for non-traditional modes of instruction. Undeniably important in the recent press toward non-traditional study has been the scarcity of financial resources and the critical attitude of many trustees and legislators toward traditional graduate programs.

There is an unproven assumption about that most non-traditional external degree programs are cheaper to operate than traditional ones, due in large part to the premise that new capital expenditures for building are unnecessary. Experience may soon show that this is not the case, since a much higher level of individualization of program design may be necessary in conjunction with much more extensive guidance and advising cost and the added need for technological aids. If this occurs, much of the appeal for non-traditional programs may be lost.

One rather crucial issue is the method of supporting graduate study. For example, if Congress approves legislation which would give support to the student with an override to the institution he attends, the effects to the graduate community would be immediate and, perhaps, devastating. There would be a tendency to enlarge enrollments beyond the traditional

ratio thought appropriate for graduate instruction, and to alter programs to coincide with the length of the available support. There would be danger, too, in the tendency to lower requirements beyond acceptable boundaries and in devising quick programs which might be regarded as unprofessional. The issues apparent in the finance of non-traditional programs seem to be in how to make intelligent and judicious use of the carrot and the stick principle to provide opportunity for innovation without losing the essential value and strength of high quality instruction.

The Institution

One could say that the above is all that is needed for graduate education. However, in our system one could also make the case that the institutions themselves have an important role to play in the support of graduate study. The institutions provide the frame and the protective shell within which programs flourish or wither, and the survival of the graduate programs is of vital concern to the whole institution, and through it, the clientele it serves. The vitality of an institution depends in large part upon the people it attracts to its graduate programs, and the institution's usefulness to the society at large is directly tied to the outcomes of graduate education.

Therefore, any changes in the goals and modes of graduate instruction would have a major impact upon each institution which currently has a large graduate school of arts and sciences and several professional schools, and to avoid that issue is to avoid talking about graduate education. Extra-institutional non-traditional programs which take students out of traditional graduate institutions, which lure faculty away from one place to another, which take resources that might otherwise have gone to the institution, and which reduce the ability of the existing institution to remain intact may

in the long run be damaging to the cause of advanced study and counter-productive in serving new students as well. One can conceive of programs that do not need classrooms, residence halls, or traditional libraries; that does not mean that one need dispense with these facilities. Non-traditional study programs may compete with institutions for resources, but it should be clear that the majority of students and the majority of the resources will continue to support the existing, traditional (though perhaps quite modified) graduate institutions.

PROCESSES

Altered processes of graduate education, particularly within existing graduate schools, would therefore appear to be the area of greatest potential for non-traditional graduate education. These processes, if followed from the point of view of the student passing through them, involve (1) program availability and selection (2) entry processes (3) program design characteristics and requirements (4) modes of study (5) evaluation of performance and recognition of learning (6) certification and credentialing (7) post-program performance and (8) reprocessing. A special section on convergent issues will raise questions on accreditation, financial aid, testing, extension programs, and degrees.

Program Availability and Selection

One of the more difficult problems faced by graduate departments is to make a good match between the scholarly interests of its faculty and the needs and demands for programs utilizing that talent. The match is rarely perfect, for social interest seems to vary more rapidly than program development, which in turn varies more rapidly than scholarly

competence. At any point in time a slightly dysfunctional relationship exists between developed programs, and the particular interests of students who want graduate study and the economic demands for certain skills and competencies within the surrounding social context. The length of the pipeline between program design, admission of students, and awarding of advanced degrees almost insures a mismatch, as the latter years of the last decade and the first of this suggest. Therefore, the tooling up time between felt needs and the establishment of well-founded programs designed to satisfy those needs is an issue of availability which tends to limit the effectiveness of established graduate schools and increases the chance that educational entrepreneurs may promote thin programs of dubious distinction. Non-traditional modes of schooling may allow graduate schools to more quickly respond to these new demands, forestalling the appearance of degree mills and widening and enriching the choices open to potential applicants.

Greater flexibility in the modes of study discussed below also allows potential students from a broader spectrum of the population to select appropriate programs commensurate with their interests and abilities from a wide range of choices. Program availability across state and regional boundaries with reduced or eliminated residence requirements will permit virtually any student with the necessary intellectual ability to pursue graduate work. The issues here are not so much tied to the student in flexible programs as to the concern that the quality of his program, if it is indeed a traditional degree that is in question, will not meet the accepted standards for that degree. The question therefore is not a mechanical but an educational one: is highly flexible graduate degree

work of high quality in some fields possible? If possible for some (perhaps literature, language, history, and certain of the social sciences), is it not possible for others because of the need to use certain equipment or materials? Can locally available materials or equipment substitute for the usual on-campus variety? Can supervision be arranged at a distance? These and similar questions come up again and again when one discusses non-traditional study programs, and can apparently only be dealt with adequately by the individuals involved.

Non-traditional graduate study characterized by expanded opportunities for non-traditional students and a wide spectrum of available programs that can be taken on a part-time, self-paced, off-campus basis for degree credit may have certain other effects. Many students now unhappily enrolled in research degree programs would have a variety of choices open to them. The research Ph.D. programs may become less central to the purposes of graduate schools, replaced in part by other degree or certificate objectives. These alternatives may indeed be a blessing to financially hard-pressed graduate schools, and may offer them an alternate raison d'etre. From the point of view of the student, changes of this kind would be welcome relief from the apparent dominance of the research Ph.D. degree.

Entry Processes

Processes of admission to graduate study programs are the reverse of the qualifications for entry coin. The typical admission process at the graduate level has generally been a selection procedure by individual department or school committees based upon the applicant's previous academic records, aptitude and achievement test scores, written evaluations from faculty members who have knowledge of him, and occasionally other

information. Recent experience, however, has placed strains upon the traditional process: larger numbers of academically disadvantaged students are applying for admission; there are increasingly severe problems inherent in the fact that most financial aid is both coordinated and often controlled at the dean's level; and trustees and legislators now often enforce strict controls on the enrollment levels of graduate schools. Moreover, as non-traditional students seek entry in larger numbers, many of whom do not possess standard credentials, new processes may have to be developed to deal with these complexities. In some institutions, some aspects of admission to graduate status is now handled by a central admissions office. As time goes on it is likely that the pressures exerted by the above developments may force an enlargement of the traditionally limited role of these offices, and incidentally provide reason for educational service agencies to help in graduate admissions to a greater extent.

At issue is the problem of assessment of academic ability, appropriate motivation, work or life experiences as possible substitutes for traditional credentials, and readiness for advanced subject matter work. With regard to new modes of study, it may also become important to assess an applicant's ability to cope with non-traditional learning situations and succeed in highly self-directed patterns of schooling. Little research has apparently been done on several of these areas, but the practical needs of admissions officers may force decisions based upon ad hoc criteria not theoretically defensible, valid, or reliable. Care in the future will have to be taken not to prejudice admission of a candidate because of an unusual career pattern. In the current situation with applicants from non-graded (plus or minus grades only, for example) undergraduate programs, graduate deans have

already warned that candidates may be at a distinct disadvantage for admission in competition with traditionally graded students. One feels that such practices will, however, continue to spread and, when coupled with trends toward admission of other kinds of non-traditional students, may force graduate schools to reexamine the premises of admission and the assumptions of the first year of graduate study.

In the financial crisis that faces many institutions, it will be increasingly difficult to admit or reject candidates based upon academic or personal merit alone. Financial need may once again play a significant part in admissions, a prospect which could defeat the interests of the whole thrust toward equal access to higher education.

Program Design Characteristics and Requirements

Alternate modes of graduate study are essentially program design problems. The range of choices and issues possible under this heading is too extensive to cover adequately here. Discussion will be limited to four generalized non-traditional approaches: part-time, extended, external, and single-purpose programs. Within each of these categories may be found students of either the traditional or non-traditional sort, and programs ending in degrees, credentials, or without certifying goals at all.

Broadly speaking, part-time programs have been possible at the graduate level since the inception of graduate education in the United States, and at virtually every institution. However, in recent decades, doctoral degree programs and many masters' programs, particularly at the more highly selective institutions, have been limited to students who can manage to attend full-time for an extended period - from one to three years, occasionally

more. There are many good reasons why this is a desirable mode of study, perhaps the best for the education of research scholars. The 1970's, however, may be a decade when such programs are a luxury that can no longer be afforded on a large scale - by the institution, by the state and federal government, or by the individual student. If this is the case, major adjustments in traditional doctoral program design may take place in the near future: several professional associations have called upon their members to accept part-time students in their programs, and the nine-campus University of California has recently published a task force report urging the adoption of part-time study on a large scale in masters' level programs.

Several issues are salient with regard to part-time advanced degree candidates. Clearly the time to degree will be lengthened unless other program requirements are adjusted. (It is ironic that one of the more important issues in the 1960's was the lamentably long time necessary to obtain advanced degrees.) The value of concentrated work in a single discipline area with the accompanying rapid socialization into the profession would be lost. Rates of attrition are liable to be higher among part-time students. Faculty members would have a more difficult advising and counseling relationship with part-time students, and students would lose the value of a full on-campus experience, particularly with peers in other fields.

More controversial and innovative is the concept of the extended university. Essentially, this mode is characterized by schooling at a distance through the use of closed circuit or educational TV, university extension practices, or in a few cases tape and cassette recorders. Educational technologists point to the time, within a decade, when video cassettes may

be available on a large scale for public use. This innovation in particular would have a major effect upon the academic world, for entrepreneurs, not to mention whole institutions, may flood the market with video-taped "packages" that are said to lead to advanced degrees. The cost, it has been estimated, of reproducing a full undergraduate program similar to a typical college offering utilizing video cassettes would be in the tens of millions of dollars. Moreover, the field is fraught with peril. What or whose programs should be recorded? What legal recourse have colleges whose students prefer taped courses to conventional ones? What copyright laws apply here? What series of packages constitutes, for example, a master's program in electrical engineering (one now exists), and what lab or experimental work must be experienced before one qualifies for a degree? The prospect of wholesale, relatively inexpensive courses available in this way with many institutions giving credit and degrees based upon these experiences may be an appalling one for many educators and institutions, yet the opportunities appear to be just as great if the development of these instruments is carefully monitored and controlled.

Except for the technology involved, of course, there is little that can be called innovative in the use of video cassettes or educational TV to offer standard, lecture-type courses simply packaged and delivered in a new way. Self-instruction, at home or at work, with periodic consultation and supervision by university faculty is at least as educationally innovative. Several university systems are now planning small regional centers in available buildings to counsel, guide, and monitor students who are engaged in nearly independent study toward degrees. A variation of the extended university concept is the campus-free unit of a state educational system, such as is proposed in Massachusetts and California, and already a reality in New York and Minnesota.

The issues for graduate education appear to be how appropriate this mode of study is for many advanced fields, and how essential practical experiences using laboratory or other equipment can be built into the programs successfully.

The extended university concept combined with part-time schooling may be the most widely accepted way of serving new students in the future, students who have stopped out of the educational process after baccalaureate degrees but who want or need advanced work for degrees or self-improvement. University extension and evening colleges have served the latter purpose well over the years, but have not, on the whole, met the degree needs of non-traditional students. University monitored and controlled development of this mode of study, exercising what safeguards to program quality as can be applied, may be the most important large-scale innovation of the decade, once issues such as who qualifies to staff such programs, what standards of academic rigor must be applied, what degrees are appropriate, and the like are resolved.

More controversial, particularly at the graduate level, is the full external degree concept. Put simply, this is characterized by an institution which grants degrees to "students" who present credentials and submit to examinations appropriate to a particular degree. The New York State Regents' Degree scheme is a typical example of this mode, built on the premise that demonstrated competence and learning, however acquired, are the only criteria for degree conferral.

Several issues are important here. What learning is appropriate and sufficient for what degree? Who decides when a student's credentials are adequate? What tests and other measurement devices can be devised to assure

knowledge equal to that of conventional students in conventional programs? How much should be charged for degree conferral? Who is qualified to evaluate the evaluators in such a loose program where the judgment of the examining committee, if that is the assessment mechanism, is so essential if high quality is to be maintained? Obviously, these are crucial issues which must be solved satisfactorily before any degree granted in this way can have much legitimate currency. It is clear also that only a rare person with an unusual background could qualify for an advanced degree, particularly a doctorate, in this way. Ironically, many institutions practice what could be considered a form of this concept - the honorary degree conferred for conspicuous and meritorious achievement outside academe. The external degree differs from the honorary degree only in three respects: rigorous measurement of learning rather than public achievement is the academic criterion, self-selection rather than institutional selection for "candidacy," and an "(Hon.)" is not attached to external degree letters.

The above concepts on an internal-external continuum are clearly not exclusive, and features of each are probably present in most existing or proposed examples of non-traditional programs. A category which remains is an even broader, inclusive one: single-purpose or unique institutions which lie largely outside the established institutions. Some may be designated proprietary schools, others are commercial firms which design programs to increase the competency of their employees, a third are educational single-purpose institutions designed to serve a particular clientele and which exist only for this purpose, a large fourth are the educational programs of the government and the military, and so forth. Quite a number of examples of these exist. Many are not degree programs; others are. Some are of high academic quality; others are clearly degree mills. Some, as we shall see

in Section III, are in gray borderline areas. That these examples exist in large numbers is no doubt partly a result of lack of communication about present flexible options in established institutions; partly they serve a need not now adequately met by the traditional system; and partly, one supposes, because of the predilection in many Americans to go out and start one's own school.

The overriding issue with these programs is that of academic quality, if established degrees are to be granted, and who or what agency should pass judgment upon them. Regional accrediting associations, professional societies, state certifying examinations and the like are all attempts to deal with this issue, but the problem continues. Some of the controversy seems to stem from unresolved conflicts in philosophies of education, and perhaps even the psychology of learning. Some is due to a differing concept of the goals of education, particularly the issue of theoretical as opposed to applied knowledge, and the appropriateness of the latter concept as a program goal for the Ph.D. degree. A good deal of the pressure to establish single-purpose institutions is exerted by agencies which require certain degrees and credentials for certain kinds of employment, or which require continued educational attainment for promotion and pay increases. It may be argued that many of these requirements are entirely justified in relation to the responsibilities involved, but the question is still open. Qualification examinations without degree requirements may be one answer, if talent exists to devise instruments valid and reliable enough to serve this purpose.

Modes of Study/Evaluation of Performance and Recognition of Learning

The "standard" modes of formal study seem to have developed for at least

two reasons: (1) groups of people all of whom share common intellectual pursuits are an enjoyable stimulation to individuals who have similar interests, and it is exciting to have at least one member of the group who has thought about the topic at hand at some length; and (2) unless one's learning has been communicated and in some sense recognized by others, it is a sterile, self-serving enterprise. It may be that the stimulation provided by modern communications media may provide the excitement and new information which nurtured schooling centers originally, and in part replace the older pattern, at least for some. That is at least a possibility. But until a new technology of measurement is developed to provide the means of recognizing, acknowledging, and validating learning not daily watched, assayed, cataloged, and graded as in our traditional system, it is not likely that a wholesale shift in the modes of learning will take place. The goals of learning govern the modes of learning to a large extent, and it is only when the goals do not require recognition and validation that the mode can change radically.

An issue which becomes important when the assessment technology is lacking is the trust and responsibility placed in those individuals charged with the assessment role. Final assessment in our modern university generally resides in a committee of faculty members. However, the medieval university and to a large extent the European system today still rests that authority in an individual scholar. Some of the educational experiments at the graduate level today, and some that are likely to emerge shortly, are characterized by modes of study that can only be adequately recognized and assessed by an individual. The issue here is how willing our degree granting and certifying agencies and institutions are to trust the judgment of a single scholar, and beyond that, the recognition society takes of degrees

earned in this way. What kinds of credentials must the scholar have to warrant the necessary trust? If the means and individuals can be found to satisfy the demands, a true shift in the modes of learning is possible.

Certification and Credentialing

In this paper the words recognition, validation, and degree conferral have referred to functions of educational institutions in performing educational services for students. Certification and credentialing, on the other hand, are viewed as separate from the educational process of learning and schooling. They are extrinsic requirements imposed upon individuals for the purpose of entry or placement in certain kinds of external job roles, often with the help of the educational institution. To some extent the bachelors', masters', and doctors' degrees are used for this purpose, beyond the control of the institution. In many cases, however, state and federal requirements call for certification of particular competencies, and credentialing of particular levels of achievement that are deemed necessary by the external agency, and thus a direct interference in the schooling process.

Non-traditional students and non-traditional programs are more than likely to run directly afoul of these requirements, which have been observed to change and evolve even more slowly than academic requirements. Because of this, it is likely that innovation in non-traditional modes of learning for prospective teachers, for example, will be hard to come by. It would be helpful to encourage a fresh approach to these certification and credentialing standards in those agencies requiring them as further experiments in non-traditional study, particularly in graduate education, go on.

Post-Program Performance

What research exists on the relationship between success in formal schooling and job performance seems to point to a very low relationship, certainly not strong enough to make life predictions based upon academic success. Other relationships appear stronger: educational levels of attainment and lifetime income, for example. However one measures job performance or success in life, the inconclusive relationship between them and schooling is disturbing to some. Observers have theorized that the patterns of classroom docility and acceptance of authority learned in the traditional educational process may inhibit those personality variables which allow uncommon achievement to occur. To the extent that this may be true, non-traditional study patterns through college and graduate school may indeed be a better preparation and training for achievement. Research whenever possible on this issue would be an important by-product of new modes of learning.

Reprocessing

One of the advantages of loosening the lock-step of graduate education generally geared to the under-30 enrollee, and providing for part-time study would be to make possible the education or re-education of large numbers of older persons. Three types of older students appear to be best served by this flexibility: (1) men and women who went directly into the job market or marriage after earning a bachelor's degree, but who at a later time wish to enter degree programs for personal or professional reasons (2) professionals whose fields have advanced sufficiently to warrant a period of re-education ("retreading") to enable them to maintain currency in their fields and (3) adults who wish to shift fields and possibly life styles in mid-life. Market

surveys may show a need for this reprocessing option, but at present the potential for development of programs serving the special needs of these persons is apparently unknown. Graduate schools of business and engineering may have extensive experience with older, returning students in short courses and summer programs; university extension has experiences to learn from as well.

The issue of the priority of these students as opposed to those more traditional is an important one in a period of scarce resources. Choice among alternative program objectives by individual schools is never an easy one, and the implications for the whole institution in this choice are particularly relevant. As already mentioned, criteria for admission may have to be different for adult applicants, as would the appropriateness of normal testing instruments. Little is yet known of the performance of large groups of older students on the GRE, for example, in comparison with younger students. These and similar questions need answers before major decisions concerning the availability of "life-long learning" opportunities are made by any one institution.

Convergent Issues

Throughout this section, issues of process have converged with those involving accreditation, financial aid, testing, university extension, and degrees. It would be well to take a moment and voice questions peculiar to these convergent issues as they relate to possible future non-traditional programs on a large scale.

Accreditation agencies have had little experience with external degree or other non-traditional programs on the whole. Members of the Commission

on Non-Traditional Study have met with representatives of all the regional associations recently for the purpose of promoting the formation of guidelines that may be of use in evaluating these programs. The Southern Regional Association has already adopted a scheme for doing so. The policy of accrediting whole institutions rather than single programs has been useful in the past, but the introduction of major programs utilizing extended or external modes of schooling may put great pressure on the associations. If graduate schools adopt new patterns in a major way, accrediting associations may likewise have to evolve new sets of rules for evaluation that may include a separate evaluation of non-traditional components of multi-purpose institutions. The issues with regard to these agencies are complex, for if they fail to take positive action toward unusual programs, the states or perhaps the federal government and its proposed new higher education agencies may set up evaluation teams of their own. Most observers of higher education would like to avoid the introduction of a number of agencies in this difficult field.

Of particular interest is the need for adequate evaluation of single-purpose institutions which adopt non-traditional methods and philosophies of education. A number of such programs are in existence; few are currently accredited. There may be much of value in their experiences for multi-purpose institutions preparing to offer similar programs. The issue of what is wheat and what chaff is clearly important for the development of non-traditional study.

Financial aid for the non-traditional student is another difficult question. Some new students can be expected to help pay their own way through a graduate program; many do so now through loans. Few disadvantaged, confined, or foreign students can be expected to contribute substantially, however. It is unlikely that institutions can reallocate already inadequate

financial aid to older or part-time students when their full-time students, who can be expected to complete programs at a higher rate, go without support. Who can or should support such students? What methods can be devised for doing so? Should state or federal agencies be asked to carry the load? These and similar questions are also important to the future of non-traditional study.

A third convergent issue is that of testing and measurement. Much has already been said of the need for measurement of learning acquired outside formal institutions, and for testing a student's suitability for independent study. Another need is to look beyond testing for strictly educational purposes to measurement and evaluation of one's potentiality for success in our culture. Some spokesmen have called for testing of personality variables such as motivation and aggressiveness, social perception and power, self-confidence and self-respect, affective awareness, work habits and styles, and the like. These and other aspects of personality assessment may be particularly important for the non-traditional disadvantaged student who is more deeply imbedded in his community than more highly mobile middle-class students. In a sense the issue is one of the need to evaluate the whole person rather than the narrow bands of ability that have a bearing on academic success. Whether the art of psychological testing is developed enough to make valid and reliable measurement instruments for these purposes in the near future is, of course, problematic. The need is apparently emerging, however, in spite of the dangers such an evaluation has for the individual. There may be a high risk of self-fulfilling prophecy in these areas.

Traditional university extension programs and evening colleges have long been active in serving some educational needs of adults in our society. The expressed goals of life-long learning, however, reach beyond the fields and

courses generally offered in these programs, and the acknowledged dependence upon and need for academic degrees and for credentialing have generally not been part of their objectives. Too often traditional university faculties have not been willing to accept more than token credit for extension work in degree programs. An issue here is to what extent the traditional extension programs might be able to modify their objectives to meet the needs of non-traditional study, and the part traditional faculty will play in these efforts. How appropriate is the experience of university extension to emerging external degree programs? What is the difference in the publics served by these two concepts, and what programmatic differences follow from that analysis?

Finally, the issue of what degrees are appropriate for what kinds of experience is a critical one in non-traditional study. Stephen Spurr in his recent book on the subject of degrees calls for an end to proliferation of specialized degrees. The reasons generally advanced for special degree designation is to differentiate the training given in the particular program from that which has been required for others, the Ph.D. particularly. One can surmise that the Ph.D. has remained a special research degree with only slightly varying requirements so long only because there are no other measures of program quality available to substitute for the degree designation.

Non-traditional study programs present yet another chance to devise a new special degree. The first issue would seem to be whether or not degrees earned (1) by examination alone (2) in external degree programs (3) in extended university programs or (4) in single-purpose institutions should be different in any way from those given for similar attainment in traditional programs. Early indications are that no differences will be attached to the degree.

For example, the several commercial company-run advanced programs outlined in Section III all plan to offer the standard degrees. The same is true of university programs, and the New York State Regents' Degree - an example of (1) above - will not offer specially annotated degrees.

A similar issue is whether or not the Ph.D. will be earned in programs which do not require a theoretically based research dissertation. The increase in the use of the D.A. for a parallel type program seems to indicate that it will not. However, advanced programs may be designed that provide the basis for leadership in the application of advanced knowledge in a professional role. Might not the Ph.D. be construed to apply to this kind of program without endangering its qualities? What about residence requirements and the character of the dissertation? Might they also not be modified substantially and retain the essential quality of the Ph.D.? The Union Graduate School's answer is that they can indeed. This issue may be increasingly important if non-traditional modes of study in doctoral programs grow substantially.

Other experiments involving degrees for sub-Ph.D. programs have been tried without great success, notably the doctor of letters, or master of philosophy concepts. If would seem essential that several alternate routes to the highest, or terminal, degree might be available in any future, more flexible graduate school if the non-traditional study movement succeeds. The prestige of the Ph.D. degree, however, will substantially reduce the effectiveness of any new degree that seeks commensurate knowledge and ability earned in an alternate mode. Therefore, an examination of what alterations might be possible, given our system, while retaining the Ph.D., would seem to be an appropriate task for the future.

The major barrier to alterations in requirements for the Ph.D. degree is the issue of quality, as has been mentioned above. A recent observer of the non-traditional study movement has had this to say of this crucial subject:

> The prospect of (non-traditional) learning will encourage fears from established interests that "standards will be lowered," but the longer term implication of the new...structures is to draw attention to the fact that, despite appearances to the contrary, there are no standards of any substance to defend. Informally, there is a commonly accepted notion of quality based on "strength of faculty" (determined by academic prestige in various disciplines), rather than learning outcomes of students. Even if learning outcomes were measured, it must be remembered that "good" institutions accept "good" students. Thus, to be meaningful, institutions would have to be evaluated by some measure of learning added...
>
> Quality assessments of (new) institutions will, of course, be conducted by the institutions themselves and by many independent observers...
>
> Thus, in answering the inevitable question about the quality of learning resulting from (new) institutions, it is to be emphasized that there is no valid standard to measure against. If there are any attempts to exclude non-traditional programs from the inner circle of legitimacy (and those that are not affiliated with accredited institutions may well encounter this difficulty), the grounds for doing so could be political rather than educational. (9, pages 26-28)

CONCEPTS

The final part of this section deals with concepts of graduate study. Again using an input-process-output model as an analogy, this part raises issues concerning graduate study output. Put another way, what are the goals of graduate study? What qualities does the existing system emphasize? What alternate qualities might be fostered with other goals? Perhaps the most crucial of all, what would we wish to do differently if we could by some magic begin again and invent a means of supporting, in

several senses, those who seek advanced knowledge and expertise in certain high level skills?

The classic debate running through much of the literature for a century has been whether or not graduate training should be designed to produce researchers of high ability, teachers of great effectiveness, or wise leaders in their areas of knowledge. One suspects that the question is better put, not which should be the institution's goals, but which of the three should receive greatest emphasis? There seems no doubt but that all three play a part in our system today, but the question of emphasis remains, and the issue of why the most prestigious degree is, by design, limited to the research objective. Are inventive makers of knowledge superior to sophisticated users of knowledge? Are contemplators more socially useful and important than actors? The issue is by no means resolved, particularly when intelligent application of existing knowledge is so vitally important to our well-being.

A second classic debate is whether graduate study should focus on creating a specialist or a generalist. A professor of great distinction once remarked that the life of a successful scholar is like the shape of an hour glass; in youth his knowledge is general and not particularly deep. In his graduate school years his vision narrows, and the first years of his professional life are the most highly specialized of his career. Only as a mature professor does he once again broaden his vision to encompass a generalized view characteristic of an educated man. He noted that a scholar is wisest and most effective in his mature years. The question is: how necessary is deep, specialized knowledge as the single goal of graduate education? Is there evidence that broadly educated scholars contribute less than specialists when whole careers are compared? This question is, like

the above, still open.

Other issues become apparent when viewing graduate education as a field for open debate. Does the training as it now exists promote self-reliance and initiative? Does the socialization into professional life encourage open-minded intelligence or self-conscious intellectuality? Do doctoral programs, for instance, allow students to think creatively and imaginatively, particularly in their theses? What part might affective education play in graduate education? In short, would a modified system focus on the needs and talents of students, or the needs of professors?

Several of the examples discussed in Section III seem to provide an alternate view of the student in keeping with the implications of these questions. Whereas most graduate programs assume that the primary activities and responsibilities of faculty are to prescribe, instruct, evaluate, and in the end, judge a student's intellectual accomplishments against some internal scale developed by the faculty member during his own training, an alternate view assumed in several new programs is that faculty primarily support, guide, and monitor student's progress but do not instruct in the traditional sense, prescribe experiences, or evaluate without the explicit participation of the student in the evaluation. The scale of measurement of accomplishment does not reside within the faculty alone, but on a scale jointly developed by the student and his primary faculty advisor. The student is clearly the one most responsible for his appropriate educational experiences, with advice and counsel from faculty, but without the customary initiation procedures (the oral exam, for example) that usually precede acceptance into the club. The difference in this view from the traditional one has many implications for future graduate degree requirements.

These issues run far afield from the general topic of external degrees and non-traditional study. Dwelling upon them at length is not appropriate for this paper, beyond raising the basic questions. Of one thing we can be quite sure: were a new system of graduate education invented, it would not restrict admission to any but those who could not properly benefit from its programs.

III

EXAMPLES

There are few existing examples of highly innovative external degree or non-traditional graduate programs. Several of those that have aspects related to the discussion in Section II are reported below. The majority of these fall in areas where advanced technology is the most salient non-traditional aspect of the program. A second large group are the single-purpose or unique programs that fall outside the main concerns of established graduate schools. Other examples of existing or planned large undergraduate non-traditional programs are included here to illustrate the probability that forms of these programs may be adapted to graduate study, particularly at the master's level. Indeed, several states are now planning to extend existing external degree programs to masters' level students.

State Systems

State systems now engaged in altering certain graduate procedures and requirements are New York and California; and the states of Illinois, Massachusetts, New Jersey, Wisconsin and Hawaii have proposals before their policy makers to implement similar changes. The changes range across the differing types of non-traditional study already discussed. For example,

in California both the state college system and the University of California plan to implement part-time degree programs for students who cannot attend one of the campuses of the system or who cannot meet with traditional classes during the daylight hours. Included in the University of California plan is the establishment of far-flung learning centers, staffed by both regular and non-ladder faculty drawn from new sources as well as the large extension program faculty. Learning centers would be locations at which largely independent students would come to confer with faculty, participate in learning sessions with some fellow students, and take examinations. Regular university faculty are expected to set the standards of the degree programs, and oversee the procedures for awarding degrees. The full report of the task force on the Extended University detailing these plans is available (10). A wholly new space-free institution with a separate administrative structure is not contemplated in this model.

New York, Minnesota (19), and Massachusetts (1,7), on the other hand, have or plan to establish new institutions - largely campus-free - to develop and run non-traditional study programs. New York has already established two complementary programs: Empire State College and the New York Regents' Degree Program. Empire State College has similarities to the University of California proposal in that both include learning centers off the established campuses, self-paced study, and the use of both regular and adjunct faculty. Mentors, as mentioned in the previous section, play a prominent role in the Empire State Plan. Qualifications for these key positions are still being developed. Empire State College President James W. Hall has recently said,

> A description of mentors' qualifications does get (...) to the heart of the matter. It's easy for us to say that we're looking for generalists who have a feel for experience, but this does not help very much. We are trying to find people who have interdisciplinary or

> multi-disciplinary academic backgrounds; we also, and perhaps especially, look for people whose own intellectual engagement with their field compels them to follow their minds into areas contiguous to the central field (this may not be inter-disciplinary); we want to locate persons who are sympathetic to the learning possibilities in non-academic experience. It is not imperative that each mentor meet every specification; it is imperative that each group of mentors at each Learning Center represent these several strengths.*

The New York plan is highly individualized. Each student makes a learning "contract" with his mentor to reach a certain specified goal, and pursues that end by all available means, including perhaps traditional on-campus course work. Master's level work is expected to soon become a part of Empire State's offerings.

The New York State Regents' Degree complements the flexible approach of Empire State by offering the possibility of associate or bachelors' degrees for demonstrated knowledge and competence, but without course, residence, or other requirements. This model is more nearly a pure adaptation of the University of London's historic External Degree program. Candidates submit to written and oral exams prepared by faculty committees from existing colleges and universities. Tests are planned to be normed on groups of graduating seniors at representative colleges in the state, and as time progresses it is hoped that these exams can be adopted for use as a college equivalent standard for any college system. Candidates need not be residents of New York to present themselves for candidacy. As yet, however, there is no intention of including graduate degrees in this program.

Other states, including New Jersey and Massachusetts particularly, are watching the developments in New York with a good deal of interest. The Massachusetts' proposal for an Open University frankly credits the innovations in New York and elsewhere for many ideas incorporated into its plans. Presently before the state legislature, the Open University proposal would create

* Letter to the author, December, 1971

an entirely new institution, without campus, as an equal partner with the existing state university campuses, and grant both bachelors' and masters' degrees. Initially, the fields offered will be limited to social action programs to train welfare case workers, labor relations mediators, drug addiction para-professionals, legal aid para-lawyers, and health workers. The college is designed to open opportunities for diverse age and social groups not now adequately serviced by the higher education system in Massachusetts. Both regular and adjunct faculties are expected to run the programs, and the concept of the "mentor" is a prominent feature. Provision is made for evaluation of the student alone as the sole prerequisite for degrees, much as the Regents' Degree allows. Moreover, a multi-media approach to schooling will be taken to reach active and potential students in metropolitan areas of the state. Finally, a Degree Committee made up of "established scholars" will constitute the final examining authority in this complex approach to higher education.

Key learning concepts in the Massachusetts' proposal include:

1. work experience as an important component of the program's academic goals;
2. acquiring a demonstrable skill or completing an independent project;
3. learning as the criterion for degrees rather than schooling; and
4. self-paced learning.

Also following New York's lead, a recent proposal for an external degree program to be called Thomas Edison College (6) in New Jersey would initially operate precisely like the New York Regents' Degree program, granting baccalaureate degrees on the basis of performance on college proficiency examinations (CPEP) pioneered in New York, and the College Level Examinations Program (CLEP), an ETS contribution. Although the intention is for Edison to grant

bachelors' degrees only, the proposal does not specifically prohibit the inclusion of graduate degrees at a later date.

Advanced Technology

The use of television and other technological aids to learning have been used for some time in this country. But with the exception of a small college program in Chicago, little systematic development of these media had been incorporated into the curricula of established institutions until the British Open University model proved the economical and effective use of these methods on a large scale. In recent years, however, a number of colleges and universities have begun a planned program utilizing new delivery systems. Starting in the fields of the sciences, and in engineering, a number of cooperative programs used closed-circuit TV to beam campus-based courses to company locations, some including talk-back features such as those at Stanford and Minnesota. At other locations, public television has been used for extension and public service courses as part of the offerings state institutions provide their constituents. A community college in California now proposes to offer college credit courses for degrees on this basis.

Perhaps the most elaborate use of closed-circuit television is in an ingenious complex pooling of resources and facilities pioneered in the northeast portion of Texas. In a program called TAGER, sixteen colleges and universities in the area beam courses and seminars on four channels to one another almost on a round-the-clock basis, as well as to several technologically-based research companies in the region. The majority of the courses in this system are graduate, and credit toward degrees on any one cooperating college campus may be gained by enrolling in the TV courses offered by any of the others, substantially enriching the course offerings possible by any

single college.

The use of video-tape devices is growing, and shows promise of being the most significant innovation in our educational system in this decade. One example of a complete degree program using all video-tape material is that offered cooperatively by RCA and the Florida Institute of Technology. A master's degree in electrical engineering may be earned in this program by successfully taking 24 credits by video-tape and submitting a thesis project or completing a comprehensive examination. The only "residence" requirement is for a required two-day seminar for each three-unit course taken - a total of about three weeks at Melbourne, Florida, over the period of the degree program, which might last from two to three years if taken part-time. Such an application of video-tape materials is clearly possible in a number of fields at the graduate level.

Research Companies

Research companies have for some time been engaged in advanced training of their employees for promotion or to increase competence and on the job performance. Neither are cooperative programs between business firms and local educational institutions a new phenomenon. What is new are the recent proposals that companies award academic degrees, after chartering by the state. For example, the Arthur D. Little (ADL) Management Education Institute has traditionally awarded a "Diploma of Professional Achievement" to successful students who have completed a nine-month, 30-course program including field work and research projects. Recently, however, ADL has petitioned the state of Massachusetts for regular degree-granting authority, including the Ph.D. The outcome of this proposal has yet to be determined.

The Rand Corporation of Santa Monica, California, is another such example. In a recent article in Policy Studies (15) Rand announced the intention to award advanced degrees - the Ph.D. specifically - to its research employees whose qualifications and achievements are commensurate with those of others who have traditionally awarded doctorates. Further advanced training and the submission of a research thesis is included in Rand's plan. Rand's program is now in its second year, and has published a prospectus outlining the course of study (20). Last June Rand was made a correspondent of the Western Association of Schools and Colleges, and hopes for full accreditation within two years.

The traditional cooperative programs between business and educational institutions has taken on a new quality recently as well. It has been pointed out that the arrangement between IBM, Kodak, and Raytheon and Colorado State University (project SURGE) reads more like a performance contract than a cooperative agreement of student preparation for masters' degrees in atmospheric, civil, industrial, electrical, and mechanical engineering. These and other examples raise the important issues of who should have degree-granting authority, and the amount of legitimacy attached to industrial degrees.

Single Purpose

Part of the diversity in the existing educational system is in the myriad special, single-purpose educational programs designed to serve a particular clientele toward a specific educational goal. The majority of examples of this mode of study are from proprietary institutions offering less than graduate level academic work. Graduate programs do exist, however, although many of these offer professional degrees only. Two recent examples may be of interest. In California, a privately incorporated (non-profit) institute named the

Humanistic Psychology Institute plans to offer academic work in applied psychology at both the baccalaureate and master's levels. Candidates successfully completing the Institute's programs are presented to nearby Sonoma State College for faculty assessment and degree conferral. The advantage of the Institute program is apparently that students at any age and at any time may enter their pipeline to pursue a specific community service goal without the encumberance of a full academic program outside the major area.

An organizing council currently active in New Jersey is establishing a College of Professional Psychology at Maplewood (11). The primary objectives of this single-purpose college are to prepare an increased number of professional psychologists in shorter time than is commonly done in the established institutions, to make undergraduate preparation an integral part of overall professional training, and to render lengthy postgraduate training unnecessary. Although this proposal calls for an autonomous professional school, granting independent Psy.D. degrees, it is hoped that in the future an arrangement may be made with an established university to include the College of Professional Psychology as a separate but equal professional school within the university structure, much as law, business, medicine, and education now enjoy.

Another unusual single-purpose program just underway is Walden University in Naples, Florida (23). Walden admits candidates for the Ph.D. or Ed.D. in educational administration who have at least a master's degree plus nine semester hours of advanced work, and at least three years of significant experience in education or an allied professional field. The only residence requirements of matriculated students is a five-week summer session devoted to intensive work on research strategy and methodology, and issues related to

the dissertation topic of each candidate. A University Review Committee passes upon the acceptability of dissertation topics for the Ph.D. or projects for the Ed.D. A minimum of two semesters of dissertation guidance, arranged by Walden with regular faculty members at institutions near the candidate's place of residence, must precede degree conferral. Since Walden has not as yet applied for accreditation, the academic standards of the institution are unknown. Participating faculty in the 1971 summer session, however, hold regular appointments at Columbia, Syracuse, Buffalo, Duke, Southern Illinois, Illinois, and Ohio State.

Still less is known of the quality of a Doctor of Arts program run by "East Coast University," Dade City, Florida. East Coast announces that candidates may only apply with a master's degree plus thirty transferable semester hours of previous credit. A four-week colloquium held in four widely separated parts of the country may earn a candidate five additional units toward a minimum of ten taken with East Coast. At least six more units must be taken at another "accredited university" subsequent to the ten at the East Coast. Fourteen more semester hours of doctoral research undertaken "off campus" complete the 30 semester hour package ($1500).

Unique

At least two quite unique graduate programs are being attempted at this time: the non-resident master's program at Goddard College (17), and the Union Graduate School experiment (21). In addition, the highly innovative Campus-Free College has appointed a committee to plan and implement a graduate degree program that may also be a radical departure from the traditional model.

Goddard has designed a highly student-centered program of one to two years duration. Each candidate will have a core (regular) faculty adviser and a field (adjunct) consultant. A high degree of goal self-determination and independent work is required, but each candidate is expected to keep in close touch with the two advisers, and to meet all the expectations outlined at the beginning of his studies to the satisfaction of himself, his committee, and the coordinator of the graduate program. The subject matter of the work undertaken may be from any discipline so long as Goddard can locate the faculty and consultant to supervise and work with students.

Union Graduate School follows a pattern similar to Goddard's but plans to award the Ph.D. Several of the key concepts in this somewhat radical view of graduate study include the following:

1. Admission will only be granted to students who clearly cannot obtain the kind of advanced training they require within any of the more conventional university doctoral programs.
2. Creativity and demonstrated capacity for self-direction and disciplined effort toward self-chosen objectives are important criteria for admission as well as high intelligence.
3. No credits are counted.
4. Each student's program is tailor-made to suit his needs, strengths, and opportunities.
5. Most study is self-directed.
6. Students may include in their study plans work in available courses and seminars at any institution in the world. Learning as apprentices to distinguished leaders in any field is encouraged.
7. All students are carefully reviewed after the first year of work.

8. All students participate in a residential colloquium early in their program of approximately four weeks duration. This is the only residence requirement.

9. Each student keeps a Cumulative Record of his educational efforts, with evaluation of all significant experiences, whether successful or not. From time to time this record is reviewed with his adviser, and may be used at the conclusion of his degree-related studies by the evaluation committee.

10. Each candidate is expected to present evidence of high achievement in a Project Demonstrating Excellence. Since this largely takes the place of the traditional dissertation, it might be helpful to quote the Union Graduate School prospectus at length:

> In place of the dissertation specified in most graduate schools, the Union Graduate School requires a Project Demonstrating Excellence. This may be a research undertaking, meeting scientific standards like those of other universities. Demonstration of excellence may, however, in the Union Graduate School, take other forms. A student may publish a valuable book or a number of scholarly articles. He may design and carry out a project of significant social change. He may create poetry, painting, musical composition, dances, films, or other art forms which win recognition as truly outstanding. The culminating project, like the rest of a student's curriculum, will be individually designed in the light of the student's abilities and goals. (21, page 20)

Learning Centers will be located at many of the member institutions of the Union of Experimenting Colleges, as well as in other cities. Colloquia will be available at these centers as well as in any area where a sufficient number of students enroll. At each center there will be one or more regular faculty members and part-time faculty drawn from nearby colleges or universities to run the colloquia, but not to offer courses in the traditional sense.

Since the Ph.D. degree holds such a distinguished place in American higher education, it would be well to quote the prospectus describing the point at which students are eligible for degree conferral:

> Decision on readiness for the Ph.D. will be made jointly by the student himself, the other students who know him best, his chief faculty advisor, other faculty who know him well, and trustworthy persons outside academic institutions. The degree is not dependent on any total of course credits or period of time. It is dependent rather on the quality of his thinking; the breadth and depth of his knowledge; the rigor with which he holds to standards of excellence for himself and others; his demonstrated and potential creativity; the achievement of genuine integration among physical, mental and emotional aspects of living; and the fusion of individual goals with social values. This is not an "easy" degree. (21, page 4)

It is clear that a number of patterns of graduate learning are emerging from the foregoing examples. The degree of success these models have will undoubtedly affect our graduate schools for some time to come. As other models emerge from what fugitive literature comes to my attention, it will be forwarded to the Panel.

IV

APPENDIX

1. Additional readings available to the Panel

2. Several recent prospectuses available to the Panel

3. Four resource summaries prepared for the Commission on Non-Traditional Study:

   A. An Inventory of External Degree Programs and Proposals. John Valley, ETS: March 3, 1971

   B. A Supplement to an Inventory of External Degree Programs and Proposals. John Valley, ETS: May 7, 1971

   C. Non-Traditional Study. Education Recaps. ETS: Spring, 1971

   D. Non-Traditional Study. Education Recaps. ETS: Winter, 1971-72

Additional Readings

Available from the Executive Secretary

1. Allen, James E., Jr. An Open University/External Degree Program for Massachusetts: Recommendations Concerning a Possible Organizational Structure. Prepared for the Massachusetts Board of Higher Education. Mimeo: October 12, 1971

2. Arbolino, Jack N. and Valley, John R. "A Plan for the Study of the Promise and the Problems of an External Degree." Discussion paper. Mimeo: June, 1970

3. _____"The Need, the Issues, and the Strategy: A Companion Paper to a Plan for the Study of the Promise and the Problems of an External Degree." Discussion paper. Mimeo: October, 1970

4. Committee on Higher Adult Education. "Twelve Issues in Non-Traditional Study." A.C.E., mimeo n.d.

5. Cross, K. Patricia. "Tentative Research Prospectus for Non-Traditional Studies." Mimeo draft dated December 21, 1971

6. Department of Higher Education, Proposal for an External Degree Program in the State of New Jersey. Mimeo: November, 1971

7. Educational Development Center. The Open University: A Preliminary Report. Prepared for the Massachusetts Board of Higher Education. Mimeo: September 15, 1971

8. Furniss, W. Todd. "Degrees for Non-Traditional Students: An Approach to New Models." Washington, D.C.: A.C.E. Special Report. April 9, 1971

9. Marien, Michael. "Space-Free/Time-Free Higher Learning: New Questions Arising from Unanticipated Post-Secondary Structures." (working draft) Mimeo: September, 1971

10. President's Task Force on the Extended University. University of California Degree Programs for the Part-Time Student: A Proposal. Berkeley, California: November, 1971

11. Schwartz, Bert D. "Philosophy and Goals of the New College of Professional Psychology in New Jersey." Mimeo n.d.

12. Solomon, Robert J. and Valley, John R. "Credit by Examination and the External Degree." Paper prepared for the Select Education Subcommittee of the Education and Labor Committee of the House of Representatives. Mimeo: n.d.

13. Troutt, Roy. Special Degree Programs for Adults: Exploring Non-Traditional Degree Programs in Higher Education. Iowa City: American College Testing Program. 1971

14. Vol. IV No. 10 issue of The Chronicle of Higher Education. November 29, 1971

15. Wolf, Charles, Jr. "Policy Sciences and Policy Research Organizations." Policy Sciences. Vol. 2, No. 1, March, 1971, pp. 1-6

Several Recent Prospectuses Available

from the Executive Secretary

16. Doctor of Education Program, Peter Sammartino College of Education, Fairleigh Dickinson University, Rutherford, New Jersey

17. Goddard College Graduate Program, Plainfield, Vermont

18. Master of Science Degree Program in Electrical Engineering, Florida Institute of Technology, Melbourne, Florida (RCA cooperative program)

19. Minnesota Metropolitan State College Prospectus, St. Paul, Minnesota

20. Rand Graduate Institute for Policy Studies, Santa Monica, California

21. The Union Graduate School, Yellow Springs, Ohio

22. University Without Walls, Union for Experimenting Colleges and Universities, Yellow Springs, Ohio

23. Walden University: Institute for Advanced Studies, Naples, Florida